

REMARKS/ARGUMENTS

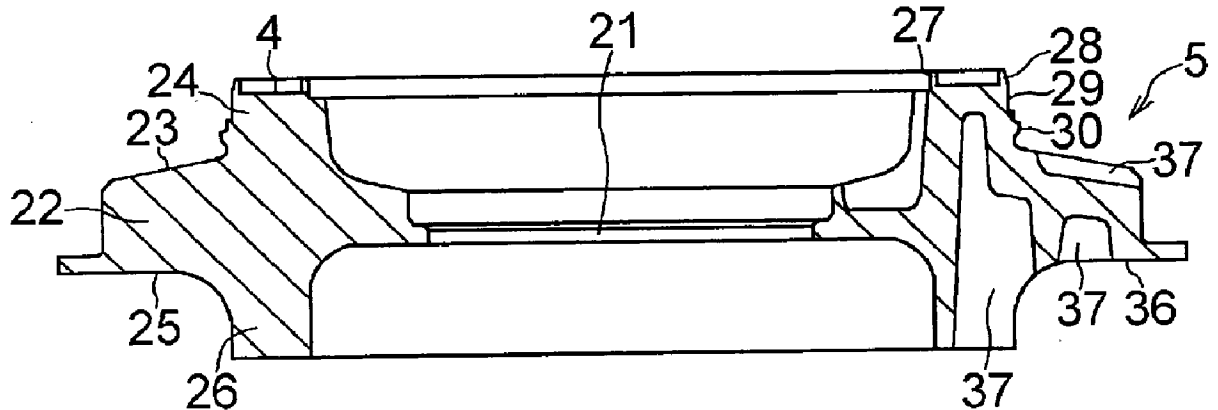
By this Amendment, claims 1, 2, and 7 are amended, and claims 15-20 are new. Accordingly, claims 1-4 and 6-20 are pending. Reconsideration in view of the above amendments and the following remarks is respectfully requested.

Claim Rejections – 35 U.S.C. § 103

Claims 1-4 and 6-14 were rejected under 35 U.S.C. §103(a) over JP 2002-257146 (the U.S. equivalent of which is Ueno U.S. Patent No. 6,918,701) in view of US Patent Publication No. 2003/0002764 to Pflugner. This rejection is respectfully traversed for at least the following reasons.

Applicants' claim 1 sets forth relative dimensions of the inner and outer diameters of the upper and lower cylindrical portions in relation to the annular base portion of the lower casing. Applicants' independent claim 17 recites, in combination, "wherein the plurality of thinning cavities are included asymmetrically in the lower cylindrical portion." Applicants' independent claim 19 recites, in combination, "wherein the lower cylindrical portion of the lower casing extends between upper and lower portions of the suspension coil spring when the suspension coil is engaged with the spring seat surface." The above features of Applicants' independent claims are not taught or suggested by Ueno, Pflugner or the alleged combination thereof.

A lower casing according to certain exemplary embodiments described in Applicants' specification is reproduced below.



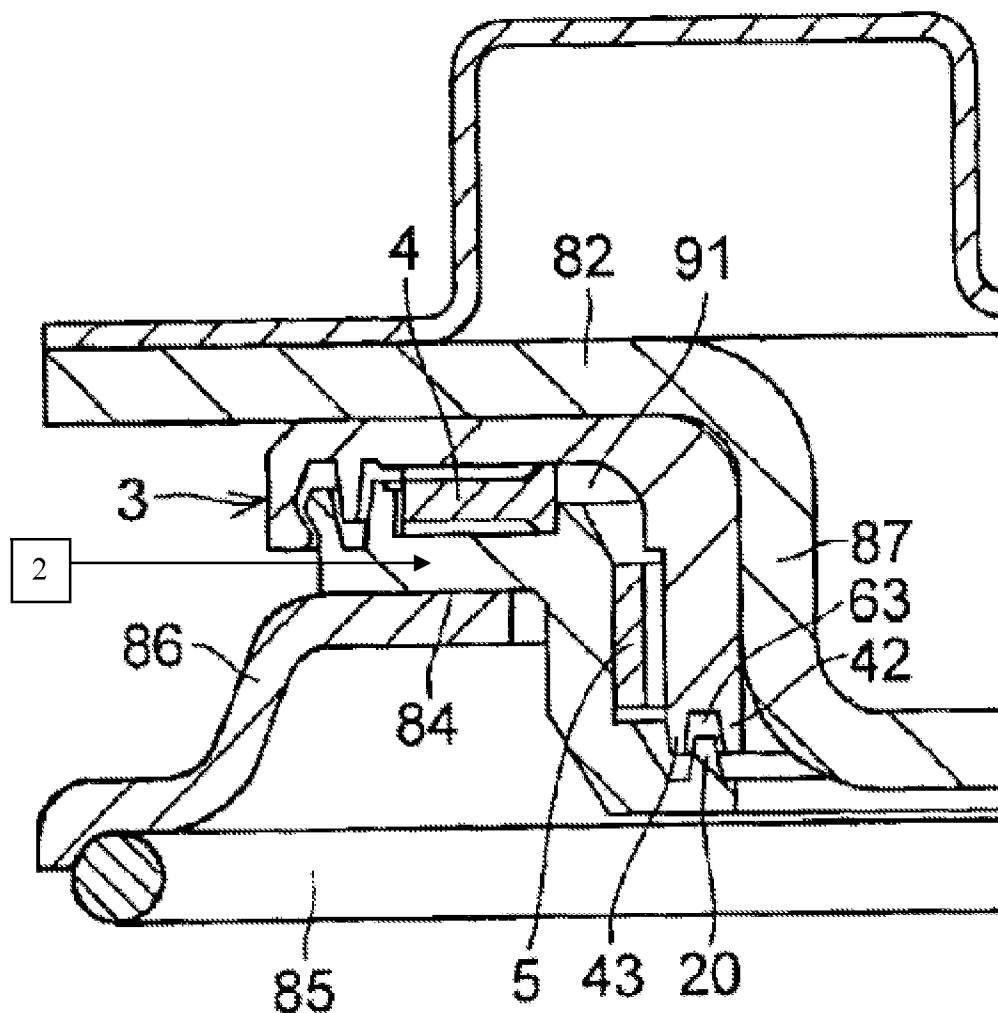
In this example, the lower casing includes an annular base portion 22, an upper cylindrical portion 24, and a lower cylindrical portion 26. As can be seen, the inner part of the annular base portion 22 has a diameter that is smaller than the inner diameter of the upper and lower cylindrical portions 22 and 24. Conversely, the outer part of the annular portion has a diameter that is larger than the outer diameter of the inner and outer cylindrical portions.

Furthermore, as shown in the above figure 4, the thinning cavities are not symmetrically disposed in this cross-section. Indeed, the three cavities 37 are all located on the right-hand side of the shown cross section.

Additionally, the exemplary embodiment shown in Applicants' Figure 1 illustrates how a suspension coil engages with the lower casing in relation to the lower cylindrical portion of the lower casing. Specifically, when the suspension coil is received onto a spring seat 25 (e.g., a lower surface of the lower casing) the lower cylindrical portion is shown to be positioned between the upper and lower parts of the suspension spring 61. Applicants' figure 2 shows another view related to this feature.

Ueno (the English counterpart of JP-2002-257146) discusses a synthetic resin sliding bearing. Ueno shows an upper casing (3) and a lower casing (2) with a radial sliding bearing

piece (5) and a thrust bearing piece (4) disposed between the two casings. (See Abstract, Fig. 1). Ueno also discusses a spring seat 86 that abuts against a lower surface (84) of the lower casing. (Column 6, Lines 45-50). Ueno's Fig. 5 is partially reproduced below and illustrates this relationship. In this reproduction of the portion of Ueno's Fig. 5, an indication to the lower casing 2 has been added.



As can be seen from the above figure, the spring seat 86 is not integrated into lower casing 2. Indeed, as noted above, Ueno discloses that the spring seat “abuts” against the casing. The Office Action appears to relate the spring seat 86 to the claimed lower cylindrical portion of

Applicants' independent claims. However, in contrast to the separate non-integrated structure of the spring seat in Ueno, Applicants' independent claims set forth that the lower cylindrical portion is part of the lower casing, which is configured as "one-piece." Additionally, the claimed lower cylindrical portion is integrally formed on "a radially substantially central portion of a lower surface of the annular base portion." Ueno fails to teach or suggest such features.

The Office Action appears to acknowledge that Ueno does not teach or suggest the lower casing as one integrated piece. The Office Action also appears to acknowledge that Ueno does not teach or suggest the claimed cavities in claim 1. The Office Action introduces Pflugner to make up for these deficiencies.

Pflugner is directed to a suspension strut that uses roller bearings. As noted above, Ueno is directed to a strut that uses a sliding bearing. A person of ordinary skill in the art would not seek to combine teachings from these two different types of bearings. As noted in the specification of the instant application, sliding bearings (as described in Ueno) are different from the roller bearing (as discussed in Pflugner). Applicants' specification also elaborates on the advantages of roller bearings (e.g., lowering of frictional torque) over sliding bearings for struts. The specification also notes the disadvantages of working with roller bearings (e.g., the higher cost). A person of ordinary skill in the art would appreciate the different mechanical aspects of the two bearing types and not seek out teachings that related to the opposite type. Accordingly, a person of ordinary skill in the art, taking the teachings of Ueno's sliding bearing, would not seek out roller bearing teachings as disclosed by Pflugner.

Additionally, even if a person of ordinary skill in the art would have combined Ueno with Pflugner, the alleged combination still fails to teach or suggest the above noted features of Applicants' independent claims.

In addition to discussing sliding bearings, Pflugner discusses using “hollow” chambers as a way to reduce weight in the overall strut assembly. The hollow chambers appear to be “symmetrically” or “concentrically” arranged in the bearing assembly. (See Fig. 1 and Paragraphs 33-34). In addition to these hollow chambers, Pflugner discusses a “support surface 15” that is used to support an end of a coil spring 16. (See Paragraph 29). The support surface 15 is located on a body that appears to extend substantially downward and away from the support surface. Fig. 1 shows the relationship between the end of the coil spring 16 and the bottom or outer end of the body that includes the support surface. (See, e.g., near element 17 in Fig. 1).

As noted above, Ueno fails to teach or suggest the claimed relationship between the upper and lower cylindrical portions and the annular base portion (or even that Ueno has a lower cylindrical portion, as the Office Action’s identification of seat plate 86 is not part of the lower casing). Specifically, in Ueno, the lower part of the lower casing appears to have the smallest diameter and the upper part appears to have the largest diameter. (See Fig. 5) In contrast, the claimed relationship sets forth that the diameters of the two portions are between the diameters of the annular base portion. Pflugner similarly does not teach or suggest this claimed structural relationship between the three portions of the lower casing (nor does the Office Action allege that it does).

In addition, the Office Action appears to acknowledge that Ueno does not teach or suggest the claimed “thinning cavities.” To make up for this, the Office Action relies upon Pflugner’s hollow chambers. (Office Action at Page 3-4). However, with respect to independent claims 17 and dependent claims 16 and 20, the claimed thinning cavities are arranged asymmetrically in the lower cylindrical portion. In contrast, Pflugner’s hollow chambers are arranged symmetrically. (See paragraph 33). Accordingly, Pflugner teaches the opposite of the

claimed cavity structure. Accordingly, the alleged combination fails to teach or suggest these features.

Furthermore, independent claim 19 and dependent claims 15 and 18 set forth structural relationships between the lower cylindrical portion and an engaged suspension coil. In Ueno, the suspension coil appears to always be completely below the lower casing. (See, e.g., Fig. 5). In Pflugner's the suspension coil appears that it is bounded by the outer portions of the lower casing. In other words, the suspension coil appears to be completely above the outer portion of the lower casing. (See, e.g., Fig. 1). However, the above noted claims set forth that the lower cylindrical portion of the lower casing extends between upper and lower parts of the suspension coil. Such a structural arrangement is not taught or suggested by Ueno, Pflugner, or the alleged combination thereof.

Accordingly, for at least the above reasons, Ueno, Pflugner, or the alleged combination thereof fails to render obvious Applicants' claims. Therefore, withdrawal of the rejection is respectfully requested.

In view of the above amendments and remarks, Applicants respectfully submit that all the claims are patentable and that the entire application is in condition for allowance.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140 under Order No. PTB-1207-120.

Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, he is invited to contact the undersigned at the telephone number listed below.

MIYATA et al
Appl. No. 10/549,360

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: Alan Dykh for
Paul T. Bowen
Reg. No. 38,009

PTB:AC/knh
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100

Reg. No 66,712